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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
Division of Forest Insect Investigations

FOREST INSECT CONDITIONS

JULIAN AREA
January 1953

Reconnaissance Survey

INTRODUCTION

A reconnaissance type survey of insect loss in the Julian area was conducted by Boyd Wickman and Paul Bourgeois of the Forest Insect Laboratory on January 27 and 28. The purpose of the survey was to determine the status of pine loss due to insects during 1952. The Julian area, consisting of private summer homes surrounding the old mining town of Julian, has had periodic insect outbreaks in epidemic proportions for the last 40 years, with major flare-ups in 1915, 1930, 1940, and 1947. In 1947, the problem was so great that private land owners in the area raised a control fund, which was matched by the State, to cope with the situation. That control program proved to be fairly successful, reducing the bark beetle infestation to one-fifth its original size within one year. However, the control program ceased a year later, due to lack of funds, and no action has been taken since to keep insect loss at a low level. Consequently, the present infestation is rather serious.

Insect and Host Species

Coulter pine, the only host species, is being destroyed primarily by the western pine beetle, Dendroctonus brevicomis Lec., with some top killing caused by the California five-spined pine engraver, Ips confusus (Lec.), also evident. The timber stand is composed principally of immature to mature, pole-sized pine trees, with some scattering of oak. The stand conditions as a whole are typical of marginal land at that altitude.

Status and Scope of Infestation

The survey consisted of a general reconnaissance of the timbered area immediately around Julian (see map), utilizing high vantage points and a traverse of the road network to count the fading and faded trees. This was supplemented by checking the larger insect-killed tree groups on foot and making a tree-by-tree count. Most of the insect damage appeared in groups of 10 or more trees, with several groups having more than 100 insect-killed trees. There was no distinct pattern to the infestation. Infested trees were found in large and small groups well scattered throughout the area. There was no preference indicated for size of tree, exposure of slope, or site.

A tubulation of the count made on the 2,500 acres sampled showed the following:

Number of Trees	Trees Per Acre	Remarks
1,020	.4	Abandoned by western pine beetle in 1952
408	.2	Currently infested by western pine beetle
188	.08	Top Killed by Ips confusus
Total 1,616	.68	Killed or attacked in 1952 infestation

DISCUSSION

The insect-caused loss in Coulter pine throughout the Julian area is definitely of serious proportions. One of the prime factors in making the infestation of such importance is the fact that large groups of dead trees are very near, if not in the front yards, of many valuable summer homes and permanent dwellings. Such conditions certainly are not increasing property values nor adding to the recreational pleasure of summer visitors.

One of the important factors of the present insect build-up is the fact that for several years no control program has been in effect in the area. Because this area has such extensive summer home development, and insects killing the pine trees are posing as a serious threat to the value of these home sites, the need for formulating a long-range control program should be seriously considered by all concerned.

RECOMMENDATIONS

At this time, it is too late to initiate any control program for the currently infested trees, as the beetles will be emerging within a short time. But a more extensive appraisal survey of the area should be made later this spring to provide a basis for determining control needs next winter. In the meantime, as suggested by this office in 1948, there should be strict adherence to forest practice rules in improvement thinnings, right-of-way and lot clearings wood cuttings, and logging operations to prevent any further build-up of bark beetles in green logs and slash.

Forest Insect Laboratory
Berkeley, California
April 7, 1953

Boyd Wickman
Field Aid

A group of approximately 200 Coulter pine located near Julian killed by the western pine beetle in 1952

A large group of Coulter pine on summer home sites in Julian killed by the western pine beetle in 1952

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BERKELEY FOREST INSECT LABORATORY
FOREST INSECT SURVEYS

JULIAN INFESTATION AREA

SAN DIEGO COUNTY, CALIFORNIA

SAN BERNARDINO MERIDIAN

LEGEND

Coulter Pine

Non-Pine, Open Land

Location of Db Killed Groups

SCALE

0 1/2 1 2 Mi.